

### *ABSTRACT OF THE DISCLOSURE*

An optical switch has first to fourth optical matrix switches in each of which a plurality of 2-input/2-output optical switch elements are arranged in a matrix to form a plurality of input ports, a plurality of auxiliary input ports, a plurality of output ports, and a plurality of auxiliary output ports. The auxiliary output ports in the first optical matrix switch are connected to the respective input ports in the third optical matrix switch, the output ports in the second optical matrix switch are connected to the respective auxiliary input ports in the third optical matrix switch, the output ports in the first optical matrix switch are connected to the respective auxiliary input ports in the fourth optical matrix switch, and the auxiliary output ports in the second optical matrix switch are connected to the respective input ports in the fourth optical matrix switch.